



Marine & Offshore

Certificate number: 69511/A1 BV

File number: .

Product code: 2204I

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

Meson (Changzhou) Flow Control System Co., Ltd.

Changzhou - CHINA

for the type of product

BALL VALVES

2-PC & 3-PC ball valve

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 22 Jan 2027

For Bureau Veritas Marine & Offshore,

At BV SHANGHAI, on 24 Jan 2024,

Hong Zhang

This certificate was created electronically and is valid without signature



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 4 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

2-PC & 3-PC ball valve

1.1 Ratings

Model	Ball valve
Size range	DN 15 to DN 300
Design standard	EN 1983 / EN13445 / ISO 5211 / ASME B16.34 / DIN3352-2 / EN12516-1 / ISO17292 / API608 / DIN3357-2
Design pressure	40 bar : DN 15 ~ DN 100 16 bar : DN 125 ~ DN 300
Class range	PN 40: DN 15 ~ DN 100 PN 16: DN 125 ~ DN 300
Design temperature	2-PC : 150°C 3-PC : 180°C
End connections	Flanged, threaded end
Design specification	Ball valve : 2 pieces / 3 pieces

1.2 Materials

Part	Material
Body	GGG40 ,GGG40.3, WCB ,WCC, CF8 ,CF8M, CF3, CF3M, 1.4469, C954, C958 ,RG5, 1.4408, A351-CF8M/CF8
Stem	GGG40 ,GGG40.3, WCB ,WCC, CF8 ,CF8M, CF3, CF3M, 1.4469, C954, C958 ,RG5, A276-316-304/F53
Seat	PTFE/polymer/metal variants (as per technical document "Seat Material Specification Metal Seated Ball Valves" Rev.1 dated 17/01/2022)
Ball	AISI304/AISI316/RG5/Hard chrom/Ni-plated/A182-F316/F304/F53

When other choices of materials are used per manufacturer's recommendations, the BV agreement is to be obtained.

2. DOCUMENTS AND DRAWINGS

- Drawing N° DDWG-BV2PC Rev. B dated 22/11/2021: Ball valve 2 pieces, flanged
- Drawing N° DDWG-BV3PC Rev. B dated 22/11/2021: Ball valve 3 pieces, flanged
- Drawing N° DDWG-BV00021700 Rev.A dated 19/06/2023 : Ball valve 2 pieces, flanged
- Drawing N° DDWG-BV00049400 Rev.A dated 19/06/2023 : Ball valve 3 pieces, thread
- Drawing N° DDWG-BV00049200 Rev.A dated 19/06/2023 : Ball valve 2 pieces, flanged
- Manual of installation, use and maintenance N° IOM-002 Rev. 1
- Material datasheet N°Technical Specification Rev.1 dated 14/12/2021
- Seat Material Specification Metal Seated Ball Valves Rev.1 dated 17/01/2022

No departure from the above documents shall be made without the prior consent of the Society. The manufacturer must inform the Society of any modification or changes to these documents and drawings.

3. TEST REPORTS

- Fire test according to API607-2022 witnessed by a BV surveyor : test reports N°LSV2023FA18017-5, N°LSV2023FA18017-4 and N°LSV2023FA18017-8 dated 17/11/2023

4. APPLICATION / LIMITATION

4.1 - May be used for the following services on board:

2-PC : - Sea water and fresh water - Compressed air - Inert gas systems - washing and fire extinguishing

3-PC : - Compressed air- Inert gas systems

4.2 - The valves belong to Class I, Class II and Class III according to the relevant requirements stated in Part C, Ch 1, Sec 10. Valves fitted on the ship side and collision bulkhead, and valves fitted on fuel oil and lub oil tanks under static pressure belong to Class II.

4.3 - The valve body, disc and seat should be suitable for the intended service. In particular the nature of materials, joints included, is to be selected according to the fluid to be conveyed and the temperature.

4.4 - The approval does not include any operating gear for remote control of the valves.

4.5 - Bilge valves will be fitted in association with a non-return valve.

4.6 - The valves are to be installed according to the manufacturer's instructions and Society's Rule requirements.

4.7 - The use of stainless steel and grey cast iron is to be restricted as per the BUREAU VERITAS Rules.

4.8 - Threaded ends are not acceptable on lines with external diameter above 25 mm and shall only be used for accessory lines and instrumentation lines.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 - The products are to be supplied by **Meson (Changzhou) Flow Control System Co., Ltd** in compliance with the type and the requirements described in this certificate.

5.2 - This type of product is within the category IBV of BV Rule Note NR320.

5.3 - BV product certificate is required.

5.4 - BV Certificate is required for materials of valve housings of class I (DN≥50) or class II (DN≥100). Materials of valve housings of class I (DN<50) or class II (DN<100) and for other parts are to be with Work's certificates.

5.5 – Each valve housing for class I and class II is to be hydraulically pressure tested to 1,5 times the design pressure. Valves intended to be fitted on the shipside below the load waterline are to be tested by hydraulic pressure not less than 0,5 MPa.

5.6 - For information, **Meson (Changzhou) Flow Control System Co., Ltd** has declared to Bureau Veritas the following production sites:

Meson (Changzhou) Flow Control System Co., Ltd
Building No 16, Xin Yu Logistics Park ,
Renmin Road No 8, YaoGuan, Wujin
Changzhou, Jiangsu Province
Peoples Republic of China

Meson AB
Kullsgårdsvägen 27
312 34 Laholm
SWEDEN

6. MARKING OF PRODUCT

Each valve shall be permanently marked with at least:

- Manufacturer's name or logo
- Type designation
- Maximum working Pressure
- Society's brand as relevant

7. OTHERS

It is **Meson (Changzhou) Flow Control System Co., Ltd's** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

This certificate supersedes the Type Approval Certificate N° 69511/A0 BV issued by the Society.

***** END OF CERTIFICATE *****